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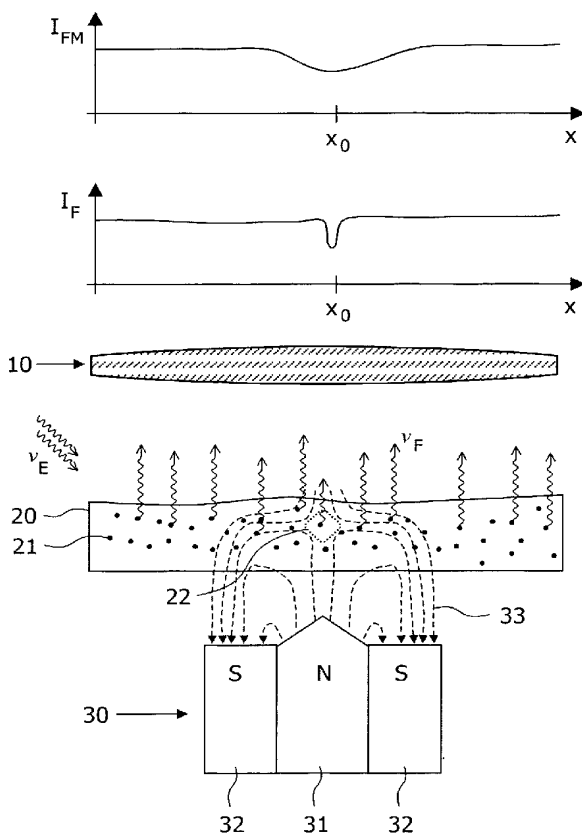
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(54) Title: FLUORESCENCE MICROSCOPE ARRANGEMENT



(57) Abstract: The invention relates to a microscope arrangement and to a method with which the spatial distribution of a magnetically and/or electrically sensitive fluorescent marker (21) in a sample (20) can be determined. Fluorescence radiation (VF) is excited by primary radiation (VE) in the sample (20) and imaged by a microscope. At the same time, within the sample (20) a spatially inhomogeneous magnetic and/or electric field (33) is generated, which has, for example, a small focal region (22) of minimum field strength. The emission of fluorescence radiation is locally modified in the focal region (22), which can be observed in the measured intensity distribution (IFM). In this way, the distribution of the fluorescence marker (21) even in regions (22) having a size below the optical resolution of the microscope (10) can be reconstructed.

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